Daniel D. Federman, M.D., presented the following remarks during the Jordan J. Cohen Lecture at the AAMC annual meeting November 5, 2007.

Healing and Heeling

It is a great privilege to be asked to join in honoring…what's his name, and to call attention to the many accomplishments for which he is duly noted and indeed, unforgettable. As soon as his name has come to me or a prompter can rescue me, I'll of course dwell appropriately on those items.

But before I correct all the imbalances in medical education, let us agree that a medical student's life should be intellectually dazzling, emotionally rewarding, and morally transcendent. It should be intellectually dazzling because the progress in biomedical science form genomics to imaging to molecular diagnosis and therapy gives the process of becoming a doctor incandescent brilliance. It should be emotionally gratifying because the possibilities of helping individual patients and populations of patients to achieve better lives have never been more closely aligned with entering students' aspirations. And it should be morally transcendent because from the first day of medical school one can feel enlisted in the never-ending challenge to achieve better health for all.

Against this background, the imbalances I shall portray are alm0st matters of taste rather than substance and thus constitute a highly personal stance but when they interfere with the process of medical education they are serious challenges to be rooted out and corrected.

Lastly, let me enter a disclaimer—I shall not talk about individual subjects or urge changed allocation. The idea that what we put before the students is encoded as is in their brain is arrant nonsense, and utterly out of keeping with the emerging

neuroscience of learning. In a class of 100 attending a fixed set of lectures, there are not one, but 100 curricula as the information is processed through that many nervous systems—differing in prior knowledge, development, and learning style. Overall, however, we do show our values, which is even more important.

I. Let me turn then to the imbalances I see in Medical Education.

A. Inspiration vs. science **(see slide #2)**

At first glance this claimed imbalance may seem both Philistine and counterintuitive, but my point is not that there is too much science in medical school. The basic science faculty of our medical schools are a major fraction of the biomedical scientists of the country. They delight in sharing their research passions with medical students. And since the introduction of evidence-based thinking in clinical departments, that domain of medical education is rich in science. Rather my point is that there is too little inspiration. Medical students do not see enough of senior faculty who are happy in their work and eager to develop new recruits. They don't see the continuity of care for patients that is the essence of internal medicine. They don't see surgical patients before the latter are draped—that magical moment that allows a human being to let another human cut into his body. And they spend too much time with junior faculty and with residents who are often tired, irritable, troubled, and not in a position to inspire young people trying to find their way.

B. Basic vs. translational science **(see slide #3)**

In recent years, faculty have venerated basic science research in promotion, appointment, and honors, not to say opportunities for supplementary income. As a result, important advances in basic sciences are crying out for clinical investigation and translational research, and we are desperately short of people going into those

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disciplines. The value structure of our schools has to be rebalanced to invite bright young students into translational research. The new curriculum at the Lerner College of Medicine at Case Medical School is a nice expression of this.

C. Clinical science and public health (**see slide #4)**

There is no such thing as too much attention to the individual when one is taking care of a sick person. All one's intellect and empathy must be conjoined in the service of diagnosis, management and caring. But in the overall distribution of medical student's time, we pay too much attention to what is instantly wrong and give too little thought to preventive measures addressed to what is probably wrong or going to be. The closer one is to dead, the better a current fourth year student or intern can serve you. But most people are not at any given time fatally ill, and the almost onanistic absorption of the CPC, our most venerated teaching function, should be replaced with a broader emphasis on likelihoods, prevention, or amelioration—coupled with insights from social science—including a focus on the patient's family and by extension the public as a whole.

D. Translational education **(see slide #5)**

It's a long way from the bench to the examining table. Most of the scientists in our basic science departments are PhD graduates with no training and often little interest in medicine. In addition to those faculty, we also need faculty members known as teacher clinicians who remain close to the emerging science of their areas—even though they are not doing the research—are able to convey the meaning of this progress to medical students and to patients in planning their clinical care. These individuals are critical members of medical school faculties and should be developed and rewarded as such. Outstanding examples of this role have been grossly underrepresented in the past and that balance should be restored.

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A close corollary of this imbalance is an inadequate respect for clinical excellence. Most medical students are going to be doctors and their learning environment and experience should include a veneration of outstanding doctoring with all that entails.

E. The worst imbalance of all

But by a wide margin the most serious imbalance in the education of our students is the faculty's absorption in the intense care of individual sick persons while the setting in which that occurs, the American health care system, is in serious disarray and getting worse.

- Fifty million uninsured;
- Half that number again underinsured;
- Many middle class individuals one serious illness separated from bankruptcy;
- Gross disparities of care and health indices along ethnic and socio-economic lines;
- Inadequate applications of preventive power to make a difference;
- And health outcomes barely competitive with those in developing countries;
- I need not go on, as all of you could write this list as well as I?

But where is the disquiet that African-American newborns have twice the mortality of whites? Where is the outrage that more than half our citizens cannot access or afford routine primary care? Where is the shame that we are nineteenth or worse in the world in health care measures? Where is the horror these findings should evoke? And where is the agreement, or at least the debate, that health care is a right of our personal constitutions, and no more alienable than those in our joint U.S. Constitution?

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We had an interesting experience at our own school that caught my attention. The ABC Program Nightline had filmed for a week at Harvard learning our approach to the care of patients and the doctor patient relationship. The same experience could have been had at any of the schools represented in this audience. With a highly skilled reporter, ample time into our students, and meetings with senior faculty and deans, the program developed a wonderful picture of the doctor—patient relationship and of the high standards al of us have for the provision of health care.

At this point I want to ask you for a suspension of—not disbelief—but belief. I want you to join me in observing a physician–patient encounter as though you were utterly naïve of it. First, two strangers meet in a closed room, unobserved. One is fully dressed, the other at least partially undressed. Within a minute or two—especially these days—one of them starts asking questions about medical symptoms but also about intensely private things—sexual preference, number of partners, techniques used,, illicit drugs taken, etc. And the other person answers these if not with aplomb certainly with the view that the questions that would have absolutely no standing in any other setting are appropriate in that room. Next, the questioner moves on to a physical examination that is a mixture of intrusiveness and physical access utterly without parallel in social interaction. It would indeed fit an expanded definition of rape. Third, the person in the Johnny agrees to take medications suggested by the fully dressed individual—up to and including general anesthesia. In other words, there is an utter submission, admittedly with informed consent, to an undoing of consciousness and self. And finally, the questioner is given the permission to operate on the other one—to remove an organ, to do a transplant, to alter the body in any way he decides. This final act goes on every day in our operating rooms, and would be a felony in any other setting.

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What justifies this extraordinary transaction? The simple four-word utterance, Good morning—I'm Dr. Jones—and with those words the unspoken but unqualified promise that the person has the knowledge, skills and—most importantly—the commitment to use them ethically on the other's behalf.

But is it ethical to have appointments so short that you can't remove the shoes and socks of a diabetic patient? Is it ethical to have an elderly patient with poor vision on eight, ten, or twelve drugs without your having access to a computerized base of information on drug interactions? Is it ethical to have patients wandering in the doughnut hole of Medicare Part D and suddenly deciding whether to pay for food or pay for the next prescription?
Probably conscious of these risks.

At 4:30 on Friday afternoon, the Nightline reporter and I were walking together when he asked me, "What happens if you train your students the way you have shown me and they then enter a world that won't let them practice as they were taught?" Without a moments thought, I answered, "then they ought to change the world." And of that more in a minute—but first, a moment of metaphor.

II. A metaphor

Oh – that's it – The honoree of my talk is Jordan Cohen, and I'd like to say a few words about him as background for the second part of my remarks.
"Now all of you know Jordy from his brilliant leadership of the AAMC."

Indeed, Jordan's emphasis on healing – h-e-a-l-i-n-g is everywhere. But while you may think you know Jordan,

- From his devotion to diversity in medicine;
- From his high standards and personal achievement in research;

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- From his rescue of graduate medical education through COGME;
- From his emphasis on healing of the individual patient and of the health care system;
- From his inspired leadership of this great organization;
- From his eloquent annual addresses to this forum.

But, unless you have seen Jordy racing a small boat beating to windward, you don't really know him. Let me illustrate. When you are sailing there are three so-called principal points of sail. When the wind is at your back, the boat is flat and progress is real but almost imperceptible. There's no tipping so there's no problem with balance (today's topic). When there's a following sea, however, you can get a little sick to your stomach. This is how I see the Republican health care initiatives.

When you're sailing at 90 degrees to the wind, a so-called reach, the boat is still almost flat and it's good for a stable lunch. The sandwiches won't slide off, the wine won't tip over. Again, balance is no problem. But direction is—going across the wind will not get you to a challenging target. That is where I perceive the Democratic proposals are: Definite improvements in re access, but not taking on the big challenges. But when you want to go exactly where the wind is coming from, you can't do it. You have to slant slightly off the direct course, this is called beating, or sailing to windward and now the boat is heeling (the second meaning of my title), and maintaining your balance can be very difficult. But when things go exactly right—the sails are trimmed perfectly, the crew's weight is distributed correctly, the sheets are tight as you can get them, the thrill is incomparable and Jordy lets out a scream—it's not truly human, it's not even primate, but it's close to a primal scream and it means the boat is sailing as well as can be against that wind, and that progress toward the goal is predictable.

III. Let me conclude.

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I said earlier that the worst imbalance in current medical education is the failure of our schools and faculties to trumpet the defects of the American health care system and to commit themselves to correcting them. This slide **(Slide 11 and 12)** shows just some of the terrible shortcomings of our health care from the viewpoint of various participants. I believe we should enlist some medical students as agents of change, committed to designing a system of care that is equitable, cost effective, prevention-oriented, universal, and thus moral. I suggest that the students should have course work, summer experiences, projects, an activist focus, and consistent mentoring. I envision a program similar to an MD/PhD or joint degree design. I picture a cadre of faculty who are dedicated to their program and design it in ways I cannot here specify. They would bring to the program insight from diverse areas of medicine and from social sciences. And I believe that this rich and activist undergraduate experience should lead to a graduate medical education that prepares these students for leadership.

I don't know what the recommendations will be. (Peter Medawar, the British immunology Nobelist, said, "Never ask me about the future of research. If I knew what it was, I'd be doing it now.) Second, I am not troubled that we will be starting with amateurs. The ark was built by amateurs, and professionals built the Titanic. Similarly, I am not concerned that we will be starting with so few people arrayed against the titans of health care. For as Margaret Mead has said, "Never doubt that a small group of committed individuals can change the world. Nothing else ever has." For if we can get some medical students and faculty to apply the standards of medical education to the problems of health care; if they search for solutions that are intellectually dazzling, emotionally gratifying, and morally transcendent; if they join with students and faculties from related disciplines in public health, social science, and economics; if they recognize that a broad systems approach is needed—we'll see roaring progress to windward. As shown in the final slide, there's a big wind out there opposing change. But when the new craft is sailing just right—when the helm, the sails, the sheets, the keel, the crew are all in balance and it starts to make its ineluctable course to

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windward, through the noise we’ll hear that deep, throaty, primal scream—and we’ll know we’re on the way to better health and health care for all Americans.

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